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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,945	07/30/2003	Todd E. Richardson	05102.0487US01	8882
23552 7590 09/26/2007 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER LANEAU, RONALD	
			ART UNIT 3714	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/629,945

Applicant(s)

RICHARDSON, TODD E.

Examiner

Ronald Laneau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07122007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Response to Amendment

1. The amendment filed on 07/12/07 has been entered. Claims 1-39 are still pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Pryor (US 2002/0036617 A1).

As per claims 1 and 22, Pryor discloses a sports simulation system comprising: a projectile tracking apparatus (camera 10 or 11) including a display surface (see fig. 1, 7) on which a visually apparent three-dimensional sports scene is presented (see fig. 1, 6), said projectile tracking apparatus (camera 10 or 11) capturing images of a projectile tracking region disposed in front of said display surface to detect a launched projectile traveling through said projectile tracking region towards said display surface (see fig. 1); and at least one processing stage receiving the image data and determining the three-dimensional positions, velocity and deceleration/acceleration of a detected projectile traveling through said projectile tracking region (page 11, [0241] – page 12, [0242]), the three-dimensional positions, velocity and deceleration/acceleration being used by said at least one processing stage to calculate a trajectory of said launched projectile into said visually apparent three-dimensional sports scene (page 34, [0647]).

As per claim 2, Pryor inherently discloses a sports simulation system according to claim 1 wherein said at least one processing stage uses said calculated trajectory to generate updated image data including a simulation of said launched projectile into said visually apparent three-dimensional sports scene following said calculated trajectory.

As per claim 3, Pryor discloses a sports simulation system according to claim 2 further comprising a display device coupled to said at least one processing stage, said display device receiving image data from said at least one processing stage and presenting said visually apparent three-dimensional sports scene including said simulation on said display surface (see fig. 1).

As per claims 4-21 and 23-35, Pryor discloses a system with a structure that meets all the limitations of the dependent claims such as updating the image data, having overlapping fields from the different cameras used to capture the projection in a generally perpendicular manner, a first processor generating two-dimensional projectile position data as said projectile travels through said projectile tracking region, said two-dimensional projectile position data being conveyed to a host processor constituting a second processing stage, said host processor using the two-dimensional projectile position data received from each first processor to generate three-dimensional projectile position data and to calculate the velocity and deceleration/acceleration of said projectile (page [0140], page [0294]).

As per claim 36, Pryor discloses a sports simulation system comprising: a projectile tracking apparatus (camera 10 or 11) including a display surface (see fig. 1, 7) on which a visually apparent three-dimensional sports scene is presented (see fig. 1, 6), said projectile tracking apparatus (camera 10 or 11) capturing images of a projectile tracking region disposed in

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front of said display surface to detect a launched projectile traveling through said projectile tracking region towards said display surface (see fig. 1); and at least one processing stage receiving the image data and determining the three-dimensional positions, velocity and deceleration/acceleration of a detected projectile traveling through said projectile tracking region (page, 11 [0241] – page 12, [0242]), the three-dimensional positions, velocity and deceleration/acceleration being used by said at least one processing stage to calculate a trajectory of said launched projectile into said visually apparent three-dimensional sports scene (page, [0647]); an audio system to broadcast audio accompanying said video sequence (page 23, [0458], page 24, [0460]).

As per claims 37-39, Pryor discloses a system with a structure that meets all the limitations of the dependent claims such as updating the image data, having overlapping fields from the different cameras used to capture the projection in a generally perpendicular manner; a tracking apparatus wherein each said processor stores a projectile characteristic signature that is compared with captured images to detect the presence of a projectile therein; wherein said frame encompasses a rectangular region and wherein said projectile tracking apparatus includes four imaging devices, each having a field of view looking across and in front of said display surface from a different corner of said rectangular region, said fields of view overlapping in a generally perpendicular manner; further comprises a mirror associated with each digital camera to direct the field of view thereof across and in front of said display surface (see fig. 1).

Response to Arguments

4. Applicant's arguments filed on 07/12/07 have been fully considered but they are not persuasive.

Applicant only argues that Pryor does not teach or suggest "processing two-dimensional projectile coordinates to determine the **velocity and deceleration/acceleration** of the projectile and using this information to calculate a trajectory of the launched projectile." In response to Applicant's arguments, Pryor discloses determining the velocity and rate of change of targeted member positions (see paragraph [0311]). As far as the deceleration/acceleration of the projectile, the system of Pryor inherently discloses such features and any software program analyzing the projectile would have to determine the deceleration/acceleration of said projectile in order to calculate the trajectory. This is a known step to calculating the trajectory of a projectile and claims 1-39 are finally rejected.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

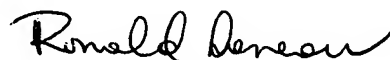
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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is (571) 272-6784. The examiner can normally be reached on 7:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ronald Laneau
Primary Examiner
Art Unit 3714

rl

9/19/07